

**Monthly Operating Report
January, 2009
Concord Wastewater Treatment Plant
Operated by Woodard & Curran**

Date: February 12, 2009

To: Alan Cathcart, Concord Water & Sewer Superintendent
cc: Chris Whelan, Town Manager
Richard Reine, Director Concord Public Works
Elena Proakis Ellis, Water & Sewer Operations Engineer

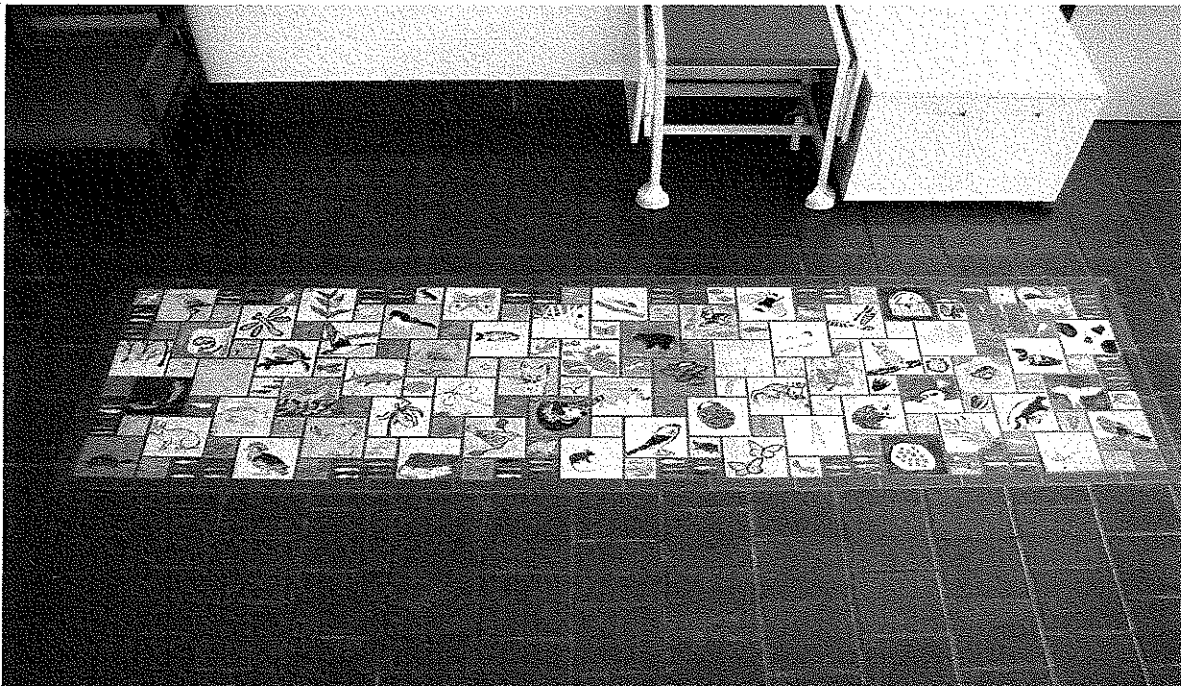
From: Michael Thompson and Staff

Key Activities This Month/Capital Program

During January all treatment processes were either operational or in ready standby. Due to flows regularly peaking near 2.0 million gallons per day instantaneous, i.e., 1390 gpm, both CoMag settling tanks remained online throughout January. The 12-month rolling monthly average flow ending January is 1.19 MGD. This is the highest flow rate seen back at least through January 2001, replacing December 2008 as the previous highest 12-month rolling average Q. As with December 2008, this high flow rate coincides with the well above average precipitation that has fallen in the area during 2008. Over 60 inches of liquid precipitation fell in 2008 versus normal average annual precipitation of approximately 47 inches. It appears that this high 12-month rolling average flow rate trend will continue through at least February due to a high monthly flow in March 2008 and slightly above precipitation in January 2009.

More notable events or tasks accomplished in January included:

1) The CoMag process operated until January 21 with reaction tanks T-3 and T-4 combined into one tank. All magnetite addition and flocculation took place within this one tank. On January 21, flow was held at the base of the trickling filters for approximately one hour while a CWT hired subcontractor restored tanks T-3 and T-4 to their original configuration. By mid-day, plant forward flow was fully restored and receiving normal treatment through the CoMag process.



A tile mural depicting local wildlife as drawn by persons of various ages and skills now decorates the plant lobby where once stood the plant main control panel.

2) In mid-January, a tile professional worked with Caitlyn Marsh from Musketquid Arts and Environment, a program of the Emerson Umbrella Center for the Arts, on the installation of a tile mural in the WWTF lobby. This mural contains over 100 one of a kind hand painted wildlife themed tiles and numerous minnow inlays that really bring color and curiosity to the plant lobby.

3) On January 27, the plant hosted a tour for a group of wastewater professionals attending the New England Water Environment Association annual conference in Boston. Approximately 15 persons from various engineering firms, treatment facilities, and related fields took a one-hour tour of the facility with particular focus on the CoMag advanced treatment process. A number of CDM personnel attended to assist with any design questions posed by the group and Waterline Industries, Corp., the facility upgrade general contractor, provided food and drink for everyone.

Maintenance Management

Following is a brief list of a portion of maintenance items completed in January:

- a) replace faulty 100 amp breaker on #2 intermediate pump with spare breaker to correct faulty breaker operation.
- b) continue to paint various plant original equipment, now that facility upgrade has concluded, including intermediate pumps, plant water pumps, doors, and unit heaters.
- c) troubleshoot and replace faulty phase monitor relay in power supply circuit to M2 - the final effluent polishing magnetic filter.
- d) service aerated sludge holding tank blower #2 including resolving small leak from rotary lobe oil bath.
- e) regular snow blower operation, loader operation, and snow shovel operation to keep up with January snow fall.

Air (Odor Control)

There were no odor complaints received at the Concord WWTP during January. Foul air continues to be collected from all plant odor control points and delivered to the odor control scrubber operating in "dry mode" to prevent freeze ups while also treating odors.

Environmental Compliance

Parameter	Monthly Avg.	Permit Limit	Notes
Flow, MGD	1.19 MGD (12-month. Avg.)	1.2 MGD	January avg. = 1.278 MGD
BOD5 (mg/l)	5 mg/l	30 mg/l	96% average BOD removal in January
TSS (mg/l)	9 mg/l	30 mg/l	90 % average TSS removal in January
Coliform, Geo.Mean #/100ml	2 cfu*/100ml	200 cfu/100ml	Daily max. of 20 cfu/100 ml on Thu. 1/22
Phosphorus	0.79 mg/l	1.00 mg/l Nov.'08-Mar.'09	1.52 mg/l daily max. on Thu. 1/22
Total Ammonia Nitrogen	.96 mg/l	Report Only	1.01 mg/l daily max. on Thu. 1/29

*cfu = coliform forming unit or colony.

There were no NPDES permit exceedences during the month of January at the Concord WWTP.

During January, the Concord WWTP performed continuous two-stage total phosphorus (TP) removal using aluminum sulfate. First stage chemical TP treatment occurred in the secondary clarifiers and second stage TP treatment took place within the CoMag® advanced treatment process. The monthly average effluent TP concentration in January was 0.79 mg/l, thereby meeting the CWWTP permit limit not to exceed 1.00 mg/l TP.

Additionally, during January all effluent disinfection was performed using ultra violet light.

January '09 WWTP MOR

Sludge Production

During January, 107,500 gallons of liquid sludge, equivalent to 16.71 dry tons, was transported to Upper Blackstone Water Pollution Abatement District (UBWPAD) in Millbury, Massachusetts.

WWTP Sludge Production in gallons / dry tons			
	2009	2008	2007
January	107,500/16.71	112,227/20.15	97,500/12.83
February		107,124/18.35	89,500/11.94
March		98,500/17.97	99,000/12.91
April		90,000/17.98	143,500/21.55
May		107,000/19.74	170,200/26.40
June		98,500/17.76	152,000/21.29
July		117,000/20.98	161,500/23.60
August		99,000/16.51	143,500/21.31
September		98,000/16.82	126,000/15.27
October		108,000/18.54	230,614/30.28
November		80,500/12.62	128,669/21.13
December		126,000/18.46	140,555/22.69
Annual Totals:		1,241,851/215.88	1,682,535/241.2

Septage Receiving

During January, the facility received 10,500 gallons of septage from Concord residences and businesses.

WWTP Septage Receipts in gallons			
	2009	2008	2007
January	10,500	22,750	61,850
February		60,300	55,000
March		55,550	48,550
April		152,300	127,000
May		135,150	153,800
June		126,450	128,750
July		117,000	159,050
August		142,400	140,250
September		219,950	112,250
October		262,900	199,700
November		165,300	179,950
December		104,050	42,000
Annual Totals:		1,636,000	1,408,150

January '09 WWTP MOR

Alarm Activity

This section provides the Town information on events that activate the facility's alarm response system. These events occur while the plant is unmanned and while both the plant's SCADA system and *Lexington Alarm* are monitoring the facility's alarm system. This report identifies alarm activity from the start of the calendar year to the present.

Concord WWTP Alarm Log

Date	Time	Alarm Source	Observations/Corrective Action/Comments
01/03/09	11:21 am	Intrusion	Headworks building door not properly latching following installation of new weather security strip by facility upgrade contractor. High wind rocked door – setting off alarm. Plant staff worked on weather strip to improve door latching.
01/07/09	7:45 pm	Hi Effluent Turbidity	Recent M2 backwash cycles producing very brief jump in turbidity as forward flow resumes. Solution is to shorten time between backwash cycles until overall treatment performance improves with slight operational adjustments over coming days.

**COMMITMENT & INTEGRITY
DRIVE RESULTS**

Concord Wastewater Treatment Plant T 978.371.7174
509 Bedford Street F 978.371.6310
Concord, Massachusetts 01742
www.woodardcurran.com

February 12, 2009



Mr. George Kretas, Environmental Engineer
Department of Environmental Protection
Bureau of Resource Protection
Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887

Re: NPDES Permit MA0100668

Dear Mr. Kretas:

The following is the operational report for the Concord WWTP for the month of January 2009:

1.) NPDES PERMIT

Monthly average influent and effluent characteristics were:

	Influent	Effluent	% Removal
Flow (MGD)		1.278	
BOD (mg/l)	146	5	96
TSS (mg/l)	88	9	90
F-coliform per 100ml		2	
Total Phosphorus (mg/l)		.79	

2.) PLANT STATUS

There were no NPDES permit exceedences during the month of January at the Concord WWTP.

During January, the Concord WWTP performed continuous two-stage total phosphorus (TP) removal using aluminum sulfate. First stage chemical TP treatment occurred in the secondary clarifiers and second stage TP treatment took place within the CoMag® advanced treatment process. The monthly average effluent TP concentration in January was 0.79 mg/l, thereby meeting the CWWTP's "off-season" permit limit not to exceed 1.00 mg/l TP.

Additionally, during January all effluent disinfection was performed using ultra violet light.

3.) PERSONNEL

Michael Thompson	Chief Operator	Grade 6-C
Richard Dolata	Maintenance Manager	Grade 6-C
William Dickson	Operator	Grade 6-C
John Parkhurst	Operator – part time	Grade 6-C
Reginald Fennel	Laborer – part time	NA

COMMITMENT & INTEGRITY
DRIVE RESULTS

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February 12, 2009



4.) SAFETY and TRAINING

During January all plant staff received 45 minutes of onsite training to review the facility's emergency action plan and Woodard & Curran's voluntary respiratory protection program.

5.) MAINTENANCE

The following is a brief list of a portion of maintenance items completed in January:

- a) replace faulty 100 amp breaker on #2 intermediate pump with spare breaker to correct faulty breaker operation.
- b) continue to paint various plant original equipment, now that facility upgrade has concluded, including intermediate pumps, plant water pumps, doors, and unit heaters.
- c) troubleshoot and replace faulty phase monitor relay in power supply circuit to M2 - the final effluent polishing magnetic filter.
- d) service aerated sludge holding tank blower #2 including resolving small leak from rotary lobe oil bath.
- e) regular snow blower operation, loader operation, and snow shovel operation to keep up with January snow fall.

6.) SOLIDS and LIQUIDS HANDLING

During January, 107,500 gallons of liquid sludge, equivalent to 16.71 dry tons, was transported to Upper Blackstone Water Pollution Abatement District (UBWPAD) in Millbury, Massachusetts. Additionally, 10,500 gallons of septage were received at the Concord WWTP during January.

7.) ODOR COMPLAINTS

There were no odor complaints received at the Concord WWTP during January.

The facility's biological odor control system ran continuously in "dry" mode during January. Dry mode means that odorous air was collected and delivered to the bio-filter as normal; however the humidification and water recirculation system have been turned off and drained for the winter months to avoid freeze-ups.

Please call me at (978) 371-7174 if you require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Thompson".

Michael Thompson
Chief Operator

Cc: Elena Proakis Ellis, Water and Sewer Operations Engineer, Town of Concord
U.S. Environmental Protection Agency, Boston, MA
Mass. DEP Div. Of Watershed Management, Worcester, MA
Bill Luksha, Compliance Manager, Woodard & Curran, Portland, ME

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: CONCORD WWTP
ADDRESS: 135 KEYES ROAD
CONCORD, MA 01742
FACILITY: CONCORD W W T F
LOCATION: 509 BEDFORD ST
CONCORD, MA 01742
ATTN: MIKE THOMPSON, CHIEF OPERATOR

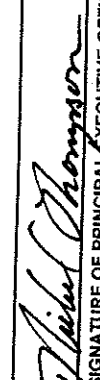
DMR Mailing ZIP CODE: 01742
MAJOR
(SUBR E)
TREATED SANITARY WASTEWATER
External Outfall

No Discharge ☐

MA0100668	001A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
01/01/2009	01/31/2009
FROM	TO

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Oxygen, dissolved (DO)									
00300 1 O Effluent Gross									
BOD, 5-day, 20 deg. C									
00310 1 O Effluent Gross									
BOD, 5-day, 20 deg. C									
00310 G O Raw Sewage Influent									
BOD, 5-day, 20 deg. C									
00310 P O See Comments									
pH									
00400 1 O Effluent Gross									
Solids, total suspended									
00530 1 O Effluent Gross									
Solids, total suspended									
00530 G O Raw Sewage Influent									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
Michael Thompson, Chief	978-371-7174	02/13/2009
TYPED OR PRINTED	AREA Code	NUMBER
	978	371-7174
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		
		

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE FOOTNOTES FOR FLOW. SUBMIT REPORT WITH DMR FOR FLOW REPORT MAXIMUM AND MINIMUM DAILY RATES AND TOTAL FLOW FOR EACH OPERATING DATE. PERMIT ISSUED 1-12-06.

EPA Form 3320-1 (Rev. 01/06) Previous editions may be used.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: CONCORD WWTP
ADDRESS: 135 KEYES ROAD
CONCORD, MA 01742

FACILITY: CONCORD WW T F

LOCATION: 509 BEDFORD ST
CONCORD, MA 01742

ATTN: MIKE THOMPSON, CHIEF OPERATOR

MA0100668
PERMIT NUMBER

001A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 01742

MAJOR

(SUBR E)

TREATED SANITARY WASTEWATER
External Outfall

No Discharge ☐

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
01/01/2009 TO 01/31/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Solids, total suspended 00530 P 0 See Comments	SAMPLE MEASUREMENT	140							0	02/07	24
	PERMIT REQUIREMENT	450 WKLY AVG		lb/d						Twice Every Week	COMP24
Nitrogen, ammonia total (as N) 00610 1 1 Effluent Gross	SAMPLE MEASUREMENT		0.96					mg/L	0	02/30	24
	PERMIT REQUIREMENT		Req. Mon. MO AVG					mg/L		Twice Per Month	COMP24
Phosphorus, total (as P) 00665 1 1 Effluent Gross	SAMPLE MEASUREMENT		0.79					mg/L	0	01/07	24
	PERMIT REQUIREMENT		MO AVG					mg/L		Weekly	COMP24
Phosphate, dissolved/orthophosphate (as P) 00671 1 0 Effluent Gross	SAMPLE MEASUREMENT		0.05					mg/L	0	01/07	24
	PERMIT REQUIREMENT		Req. Mon. MO AV MN					mg/L		Weekly	COMP24
Aluminum, total (as Al) 01105 1 0 Effluent Gross	SAMPLE MEASUREMENT		2270					ug/L	0	01/30	24
	PERMIT REQUIREMENT		Req. Mon. MO AV MN					ug/L		Monthly	COMP24
Flow, in conduit or thru treatment plant 50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	1.19	1.559	Mgal/d					0	99/99	RC
	PERMIT REQUIREMENT	12 MO AVG	Req. Mon. DAILY MX	Mgal/d						Continuous	RCORDR
Flow, in conduit or thru treatment plant 50050 P 0 See Comments	SAMPLE MEASUREMENT	1.278	1.559	Mgal/d					0	99/99	RC
	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	Mgal/d						Continuous	RCORDR

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and analyze the information submitted and that the information submitted fully and accurately represents the information submitted to the best of my knowledge and belief. I am aware that there are penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
Michael Thompson, Chief Operator	978-371-7174	02/13/2009
TYPED OR PRINTED	AREA CODE	NUMBER
		MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE FOOTNOTES FOR FLOW. SUBMIT REPORT WITH DMR FOR FLOW REPORT MAXIMUM AND MINIMUM DAILY RATES AND TOTAL FLOW FOR EACH OPERATING DATE. PERMIT ISSUED 1-12-06.

EPA Form 3320-1 (Rev. 01/06) Previous editions may be used.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: CONCORD WWTP
ADDRESS: 135 KEYES ROAD
CONCORD, MA 01742
FACILITY: CONCORD WWTF
LOCATION: 509 BEDFORD ST
CONCORD, MA 01742
ATTN: MIKE THOMPSON, CHIEF OPERATOR

MA0100668
PERMIT NUMBER

001A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 01742
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
01/01/2009 TO 01/31/2009

(SUBR E)
TREATED SANITARY WASTEWATER
External Outfall

No Discharge ☐

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	VALUE	VALUE	UNITS	VALUE	VALUE	UNITS			
Chlorine, total residual	*****	*****	*****	*****	*****	*****	0	01/01	GR
50060 10 Effluent Gross	*****	*****	*****	NO DI = C	36 DAILY MX	mg/L	0	Daily	GR
Coliform, fecal general	*****	*****	*****	*****	*****	mg/L	0	Daily	GR
74055 10 Effluent Gross	*****	*****	*****	2	200 MO GEO	#/100ml	0	Twice Every Week	GR
BOD, 5-day, percent removal	*****	*****	*****	96	85 MO AV MN	%	0	Monthly	CA
81010 K 0 Percent Removal	*****	*****	*****	90	85 MO AV MN	%	0	Monthly	CA
Solids, suspended percent removal	*****	*****	*****	*****	*****	%	0	Monthly	CA
81011 K 0 Percent Removal	*****	*****	*****	*****	*****	%	0	Monthly	CA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Michael Thompson, Chief Operator	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Michael Thompson</i>	TELEPHONE 978-371-7174	DATE 02/13/2009
TYPED OR PRINTED		AREA CODE	NUMBER
COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) SEE FOOTNOTES FOR FLOW, SUBMIT REPORT WITH DMR FOR FLOW REPORT MAXIMUM AND MINIMUM DAILY RATES AND TOTAL FLOW FOR EACH OPERATING DATE. PERMIT ISSUED 1-12-06.		MM/DD/YYYY	

Monthly Report: January, 2009
 Concord Wastewater Treatment Plant
 509 Bedford Street
 Concord, MA 01742
 Michael Thompson, Chief Operator

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NPDES: MA0100668

Date	Day	Weather		Final Effluent									Settleable Solids			
		Rainfall inches	Temp. F°	Flow, MGD			D.O. mg/L	pH su			Temp C°	Turbidity NTU	Raw Influent	Primary Effluent	Secondary Effluent	Final Effluent
				Max.	Min.	Total		grab 1	grab 2	grab 3						
1	Thu	0	21	2.05	0.50	1.5046		6.6			9.9	0.5				<.1
2	Fri	0	24	2.40	0.45	1.5588	9.5	6.7	6.8	6.9	10.6	2.0	9.0	<.1	<.1	<.1
3	Sat	0.02	34	2.05	0.40	1.4482		6.7			14.0	0.9				<.1
4	Sun	0.04	32	2.00	0.50	1.4274		6.9			13.6	1.7				<.1
5	Mon	0.05	36	2.00	0.45	1.4815		6.6	6.9	6.9	13.4	2.8	10.0	0.2	<.1	<.1
6	Tue	0	36	2.20	0.45	1.4694	9.8	6.8	6.8	6.6	11.7	2.2	10.0	0.5	<.1	<.1
7	Wed	0.61	34	2.30	0.50	1.5216		6.4	6.8	6.6	12.4	2.2	11.0	0.4	<.1	<.1
8	Thu	0.23	36	1.90	0.50	1.4341		6.3	7.0	6.6	12.0	1.4	7.0	0.3	<.1	<.1
9	Fri	0	32	2.15	0.45	1.4565		6.6	6.6	6.6	12.3	1.9	10.0	1.0	<.1	<.1
10	Sat	0	26	1.80	0.45	1.3351		6.4			13.9	1.7				<.1
11	Sun	0	28	1.70	0.40	1.3096		6.3			12.1	2.7				<.1
12	Mon	0.17	34	2.20	0.40	1.4118	10.0	7.0	6.8	6.9	12.0	2.3	12.0	<.1	<.1	<.1
13	Tue	0.01	36	1.90	0.50	1.3606		6.3	6.6	6.7	11.7	2.3	7.5	<.1	<.1	<.1
14	Wed	0.02	30	2.15	0.30	1.3228		6.9	6.3	6.4	10.8	2.4	10.0	0.1	<.1	<.1
15	Thu	0	16	1.90	0.35	1.2887		6.6	6.5	6.6	10.8	3.0	10.0	<.1	<.1	<.1
16	Fri	0.01	12	1.90	0.30	1.2545		6.4	6.7	6.8	10.9	2.7	10.0	<.1	<.1	<.1
17	Sat	0	15	1.65	0.35	1.1487		6.4			8.9	5.0				<.1
18	Sun	0	23	1.60	0.35	1.1304		6.5			9.4	4.3				<.1
19	Mon	0.15	32	1.65	0.30	1.1881		6.3			10.0	3.7				<.1
20	Tue	0.09	31	3.55	0.01	1.2382	9.8	7.0	7.1	7.3	11.9	0.6	12.0	0.1	<.1	<.1
21	Wed	0	26	1.90	0.30	1.2490		6.6	6.9	6.8	11.5	4.7	8.0	0.2	<.1	<.1
22	Thu	0.03	31	1.80	0.25	1.1858		6.9	7.0	7.0	11.3	4.9	15.0	<.1	<.1	<.1
23	Fri	0.2	36	1.90	0.20	1.1358		6.6	6.6	6.7	12.0	5.7	11.0	0.1	<.1	<.1
24	Sat	0.02	35	1.55	0.15	1.0520		7.1			10.4	6.2				<.1
25	Sun	0	19	1.60	0.25	1.0256		6.3			9.8	5.0				<.1
26	Mon	0	18	1.75	0.25	1.1252	9.9	6.4	6.9	6.7	10.7	4.4	16.0	<.1	<.1	<.1
27	Tue	0	25	1.70	0.25	1.1166		6.9	7.0	6.6	10.5	1.0	12.0	<.1	<.1	<.1
28	Wed	0.55	25	1.70	0.25	1.1571		6.9	6.4	6.6	11.4	4.0	12.0	<.1	<.1	<.1
29	Thu	0.16	24	1.80	0.30	1.1586		6.3	6.6	6.5	13.6	1.1	12.0	<.1	<.1	<.1
30	Fri	0.14	24	1.75	0.25	1.1150		6.9	6.8	6.8	11.4	4.9	14.0	<.1	<.1	<.1
31	Sat	0	24	1.55	0.20	1.0162		6.4			10.7	5.5				<.1
Total		2.50				39.628										
Ave		0.08	27	1.94	0.34	1.2783	9.8				11.5	3.0	10.9	0.3	<.1	<.1
Median			28	1.90	0.35	1.2545	9.8	6.6	6.8	6.7	11.4	2.7	10.5	0	<.1	<.1
Max		0.61	36	3.55	0.50	1.5588	10.0	7.1	7.1	7.3	14.0	6.2	16.0	1.0	<.1	<.1
Min		0.00	12	1.55	0.01	1.0162	9.5	6.3	6.3	6.4	8.9	0.5	7.0	0.1	<.1	<.1
				Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	
Monthly Average Effluent Flow, MGD				1.4638	1.7342	1.3299	1.0717	0.8694	0.9026	1.0725	1.1161	1.0654	0.9354	1.4574	1.2783	
12-Month Running Average Effluent Q, MGD				0.96	1.02	1.00	0.99	0.97	0.98	1.01	1.05	1.08	1.10	1.16	1.19	

Note: Daily total flow was inadvertently not recorded on 1/27. The total given is an estimate derived from averages of the two days before and the two days after the 27th.

Monthly Report: January, 2009
 Concord Wastewater Treatment Plant
 509 Bedford Street
 Concord, MA 01742
 Michael Thompson, Chief Operator

Page 2

NPDES: MA0100668

Mike Thompson	Chief Operator	VI
Richard Dolata	Maintenance Chief	VI
William Dickson	Operator	VI
John Parkhurst	Operator	VI

5 Day Biochemical Oxygen Demand												
Date	Day	Raw Inf. mg/L	Raw Inf. lbs/day	Prim. Eff. mg/L	Prim. Eff. lbs/day	Primary % Removal	Sec. Eff. mg/L	Sec. Eff. lbs/day	Secondary % Removal	Final Eff. mg/L	Final Eff. lbs/day	Final % Removal
1	Thu	106	1330	88	1104	17%	15	188	86%	4	50	96%
2	Fri											
3	Sat											
4	Sun											
5	Mon											
6	Tue	114	1397	123	1507	-8%	9	110	92%	5	61	96%
7	Wed											
8	Thu	136	1627	117	1399	14%	12	144	91%	5	60	96%
9	Fri											
10	Sat											
11	Sun											
12	Mon											
13	Tue	119	1350	80	908	33%	10	113	92%	7	79	94%
14	Wed											
15	Thu	151	1623	98	1053	35%	13	140	91%	5	54	97%
16	Fri											
17	Sat											
18	Sun											
19	Mon											
20	Tue	127	1311	108	1115	15%	15	155	88%	7	72	94%
21	Wed											
22	Thu	183	1810	155	1533	15%	16	158	91%	7	69	96%
23	Fri											
24	Sat											
25	Sun											
26	Mon											
27	Tue	221	2058	134	1248	39%	6	56	97%	5	47	98%
28	Wed											
29	Thu	161	1556	90	870	44%	5	48	97%	4	39	98%
30	Fri											
31	Sat											
Total												
Ave		146	1562	110	1193	23%	11	124	92%	5	59	96%
Median												
Max		221	2058	155	1533	44%	16	188	97%	7	79	98%
Min		106	1311	80	870	-8%	5	48	86%	4	39	94%
Weekly Average		Week 1	Week 2	Week 3	Week 4	Week 5						
Effluent BOD, mg/L		4	5	6	7	4	Week 1= 12/28 - 1/3		Week 3= 1/11 - 1/17			
Effluent BOD, lbs/day		47	60	66	70	43	Week 2= 1/4 - 1/10		Week 4= 1/18 - 1/24			
									Week 5= 1/25 - 1/31			

Note: Average Final % Removal is the final removal of the average data for this month.

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Concord Wastewater Treatment Plant
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Concord, MA 01742
Michael Thompson, Chief Operator

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Concord, MA 01742		Type: Advanced/Trickling Filter							12-Month Average Flow, MGD : 1.19			
Michael Thompson, Chief Operator		Design Capacity: 1.2 MGD							Population Served: 17,100			
Date	Day	Total Suspended Solids										
		Raw Inf. mg/L	Raw Inf. lbs/day	Prim. Eff. mg/L	Prim. Eff. lbs/day	Primary % Removal	Sec. Eff. mg/L	Sec. Eff. lbs/day	Secondary % Removal	Final Eff. mg/L	Final Eff. lbs/day	Final % Removal
1	Thu	69	866	50	627	28%	25	314	64%	7	88	90%
2	Fri											
3	Sat											
4	Sun											
5	Mon											
6	Tue	56	686	51	625	9%	14	172	75%	13	159	77%
7	Wed											
8	Thu	61	730	53	634	13%	15	179	75%	10	120	84%
9	Fri											
10	Sat											
11	Sun											
12	Mon											
13	Tue	60	681	46	522	23%	23	261	62%	9	102	85%
14	Wed											
15	Thu	100	1075	52	559	48%	26	279	74%	8	86	92%
16	Fri											
17	Sat											
18	Sun											
19	Mon											
20	Tue	90	929	56	578	38%	17	176	81%	7	72	92%
21	Wed											
22	Thu	93	920	58	574	38%	20	198	78%	9	89	90%
23	Fri											
24	Sat											
25	Sun											
26	Mon											
27	Tue	163	1518	58	540	64%	10	93	94%	7	65	96%
28	Wed											
29	Thu	104	1005	52	502	50%	12	116	88%	8	77	92%
30	Fri											
31	Sat											
Total												
Ave		88	934	53	574	35%	18	199	77%	9	95	90%
Median												
Max		163	1518	58	634	64%	26	314	94%	13	159	96%
Min		56	681	46	502	9%	10	93	62%	7	65	77%
Weekly Average		Week 1		Week 2		Week 3		Week 4		Week 5		
Effluent TSS, mg/L		6		12		8		8		8		Week 1= 12/28 - 1/3
Effluent TSS, lbs/day		74		140		94		80		71		Week 2= 1/4 - 1/10
												Week 3= 1/11 - 1/17
												Week 4= 1/18 - 1/24
												Week 5= 1/25 - 1/31

Note: Average Final % Removal is the final removal of the average data for this month.

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Date	Day	Final Effluent					Septage	Sludge				
		F-Coliform	Nutrients			Metals		gallons	%	pH	gallons	dry tons
		colonies / 100ml	Ortho- phosphate (P) mg/L	Total Phosphorus (P) mg/L	Ammonia (N) mg/L							
1	Thu		0.040	0.16								
2	Fri							3.5%	5.8	9,000	1.31	
3	Sat											
4	Sun											
5	Mon						2000	3.8%	5.9	9,000	1.43	
6	Tue	1	0.021					3.5%	5.6			
7	Wed											
8	Thu	1		0.48				3.8%	5.4	9,000	1.43	
9	Fri							3.3%	5.9	9,000	1.24	
10	Sat											
11	Sun											
12	Mon						3000					
13	Tue	1	0.069				2500	3.6%	5.6	9,000	1.35	
14	Wed							3.9%	5.9	9,000	1.46	
15	Thu	1		0.88	0.91							
16	Fri							3.3%	5.8	8,500	1.17	
17	Sat											
18	Sun											
19	Mon											
20	Tue	4				2270		3.4%	6.0	9,000	1.28	
21	Wed											
22	Thu	20	0.074	1.52				4.5%	5.7	9,000	1.69	
23	Fri											
24	Sat											
25	Sun											
26	Mon							3.9%	5.5	9,000	1.46	
27	Tue						3,000					
28	Wed	1						3.6%	5.6	9,000	1.35	
29	Thu	1	0.044	0.90	1.01							
30	Fri							4.1%	5.6	9,000	1.54	
31	Sat											
Total							10,500			107,500	16.71	
Ave		2	0.050	0.79	0.96	2270	2,625	3.7%		8,958	1.39	
Median			0.044	0.88	0.96	2270	2,750	3.6%		9,000		
Max		20	0.074	1.52	1.01	2270	3,000	4.5%		9,000	1.69	
Min		1	0.021	0.16	0.91	2270	2,000	3.3%		8,500	1.17	

Note: Fecal Coliform average is a geometric mean.